

REMARKS/ARGUMENTS

1. The Examiner rejected claims 1-6 under 35 U.S.C. § 102(b) as being anticipated by Hutchins (U.S. Patent No. 5,384,893). Claims 1 and 3-6 were objected to under 37 C.F.R. § 1.75(a) because various phrases contained therein require clarification. The specification was also objected to for various reasons, including having typographical errors, having impermissible embedded hyperlinks, having an abstract that contains more than 150 words, and having a title that is not sufficiently descriptive of the invention. Reconsideration of this application is respectfully requested in view of the amendments and/or remarks provided herein.

Rejection under 35 U.S.C. § 102(b)

2. Claims 1-6 were rejected under 35 U.S.C. § 102(b) as being anticipated by Hutchins. With respect to claims 1-3, Applicants disagree with the Examiner's characterization of said claims in view of the disclosure of Hutchins. With respect to claims 4-6, Applicants have herein amended independent claim 4 to more clearly distinguish the recitations of said claim over the disclosure of Hutchins. In particular, Applicants have amended independent claim 4 to require each word of the sentence to be divided into a plurality of diphones based on combinations of letters in a letter to phoneme rules database. The letter to phoneme rules database contains phonetic representations of a predetermined group of words (e.g., 100,000 words). Each letter of each word in the predetermined group of words is represented by a corresponding phoneme. The phoneme for any particular letter is determined based on letters that precede and succeed the particular letter. Hutchins provides no comparable teaching or suggestion.

Hutchins discloses a text-to-speech (TTS) system in which incoming sentences are parsed into punctuation and words. The words are processed according to sets of grammatical rules. All the words are divided into diphones to facilitate application of prosody information on a diphone-by-diphone basis. The diphone waveforms are adjusted to incorporate prosody information and are concatenated to form the output speech signal. While Hutchins does disclose the use of a dictionary lookup module to compare incoming words with words in the dictionary, Hutchins completely fails to disclose or suggest that any speech is produced other than on a diphone-by-diphone basis. In other words, Hutchins generates each spoken word on a diphone-by-diphone basis to facilitate the inclusion of prosody information in each word.

By contrast, Applicants' claim 1 provides for the generation of a word's sound file through the combination of diphones only when the word is not one of a group of pre-recorded words. Thus, Applicants' claim 1 recites a method in which some or all of the words of the input sentence may be generated directly through a sound file (e.g., a wav file) completely independent of the use of diphones. As evident from the flow of Hutchins' Figure 1 and its associated description, Hutchins' process is quite different and requires every word to be produced through use of diphones. While Applicants' method as recited in claim 1 contemplates the use of diphones under certain conditions, such method does not require every audibly generated word to be produced using diphones as does the method disclosed in Hutchins. In addition, while Applicants' method as recited in claim 2 contemplates the optional use of prosody (inflection), such method does not require each audibly generated word to include prosody information as does the method disclosed in Hutchins. Therefore, the methods recited in Applicants' claims 1 and 2 are completely different than the method disclosed in Hutchins. Applicants have amended claim 1 simply to clarify the use of a diphone independent sound file when the word-at-issue is in the list of pre-recorded words.

With respect to independent claim 4, while Hutchins discloses a diphone database, Hutchins does not disclose the use of a letter to phoneme rules database in which each letter of each word of a predetermined set or group of words in the database is represented by a corresponding phoneme as is recited in Applicants' claim 4. As explained in the Background section of Applicant's specification, multiple letters are often represented by a single phoneme. Hutchins fails to teach or suggest otherwise. By contrast, in Applicants' protocol, each letter of the words in the predetermined group is assigned a phoneme, with blank phonemes being used as necessary to represent silent letters or letters whose sound is encompassed in a preceding or succeeding letter. The diphones for applicable words are then created based on the combinations of letters in the letter to phoneme rules database. Hutchins fails to disclose or suggest such a one-to-one letter to phoneme relationship or the use thereof to produce diphones.

Therefore, in view of the clarifying amendments to claim 1 and the substantive amendments to claim 4, Applicants submit that claims 1 and 4 are not disclosed or suggested by Hutchins. Accordingly, Applicants submit that claims 1 and 4 are now in proper condition for allowance and respectfully request that claims 1 and 4 may be passed to allowance.

Claims 2 and 3 depend upon claim 1, which claim has been shown allowable above. Therefore, since claims 2 and 3 each introduce additional subject matter that, when considered in the context of the recitations of claim 1, constitutes patentable subject matter, Applicants respectfully submit that claims 2 and 3 are in proper condition for allowance.

Claims 5 and 6 depend upon claim 4, which claim has been shown allowable above. Therefore, since claims 5 and 6 each introduce additional subject matter that, when considered in the context of the recitations of claim 4, constitutes patentable subject matter, Applicants respectfully submit that claims 5 and 6 are in proper condition for allowance.

Objections to the Claims

3. Claims 1 and 3-6 were objected to under 37 C.F.R. § 1.75(a) because various phrases contained therein require clarification. Applicants have amended claims 4-6 to clarify said claims as requested by the Examiner. In addition, Applicants have amended claim 1 as detailed above. With the amendment to claim 1, Applicants submit that the recitations of original claim 3 meet the requirements of 37 C.F.R. § 1.75(a). Accordingly, Applicants submit that claims 1 and 3-6 comply with 37 C.F.R. § 1.75(a) and are now in proper condition for allowance.

Objections to the Specification

4. The specification was objected to for various reasons, including having typographical errors, having impermissible embedded hyperlinks, having an abstract that contains more than 150 words, and having a title that is not sufficiently descriptive of the invention. Applicants have amended the specification to correct the informalities cited by the Examiner. Applicants also attach hereto a replacement sheet for the abstract. Applicants submit that no new matter has been added as a result of the enclosed amendments to the specification. Accordingly, Applicants respectfully request that the Examiner withdraw his objections to the specification.

Other Amendments to the Claims

5. Applicants have herein amended dependent claims 2, 3, 5, and 6 to correct minor informalities, broaden the scope of such claims, and/or make such claims consistent with amendments to their respective base claims. None of these amendments were intended to narrow the claims in any manner (other than as intended by the amendments to claim 4) or were made for any purpose related to patentability. In addition, Applicants submit that all such claim amendments are fully supported by Applicants' originally filed specification.

Other Amendments to the Specification

6. Applicants have herein amended various paragraphs of the specification to correct minor typographical errors or other informalities contained therein. Applicants submit that no new matter has been added as a result of such amendments and that none of the amendments were made for any purpose related to patentability.

New Claims

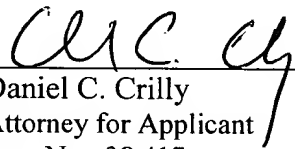
7. Applicants have herein added new claims 7-20 directed at various patentable features of Applicants' invention. For example, claims 7 and 16 recite methods in which one or more words of the parsed sentence are compared to a list of homographs and, if the word is on such list, a sound file is played for the word based on the parts of speech for words adjacent the homograph. Claims 8 and 17 recite methods in which a parsed word is analyzed to determine whether it includes a number and, if it does, the word is audibly spelled out, as opposed to playing a sound file or combining diphone sound files. Claims 9 and 18 recite methods in which a letter to phoneme rules database is provided to produce proper diphones, wherein, as discussed above with respect to claim 4, such database includes a predetermined group of words that have all their letters represented by corresponding phonemes and the phoneme for a particular letter is determined based on letters that precede and succeed the particular letter. Claims 10, 13, and 19 recite methods in which one or more words in the letters to phoneme rules database include multiple letters that collectively have a single phonetic representation, wherein a first letter of the multiple letters is represented by a phoneme that corresponds to the phonetic representation and the remaining letters of the multiple letters are represented by blank phonemes. Claims 11, 14, and 20 recite methods in which the phoneme for a particular letter of a word in the letter to

phoneme rules database is established or determined based on the three letters that precede the particular letter and the three letters that succeed the particular letter. Claims 12 and 15 recite methods in which the phoneme for a particular letter of a word in the letter to phoneme rules database is established or determined based on the one letter that precedes the particular letter and the two letters that succeed the particular letter. Applicants submit that the recitations of new claims 7-20 are not disclosed or suggested by Hutchins or any of the other references of record. Applicants further submit that new claims 7-20 are fully supported by Applicants' originally filed specification and, therefore, do not introduce any new matter into the specification.

Applicants originally submitted six claims, two of which were independent. However, Applicants paid for the examination of up to twenty claims, three of which could be independent. With the addition of new claims 7-20, twenty claims remain pending in the application, only three of which are independent. Accordingly, no fees are believed due as a result the addition of new claims 7-20.

8. The Examiner is invited to contact the undersigned by telephone, facsimile or email if the Examiner believes that such a communication would advance the prosecution of the instant application. Please charge any necessary fees associated herewith, including extension of time fees (if applicable and not paid by separate check), to the undersigned's Deposit Account No. 50-1111.

Respectfully submitted,

By: 
Daniel C. Crilly
Attorney for Applicant
Reg. No.: 38,417
BRINKLEY, MCNERNEY,
MORGAN, SOLOMON & TATUM, LLP
200 East Las Olas Blvd., Suite 1900
Ft. Lauderdale, FL 33301
Phone: (954) 522-2200/Fax: (954) 522-9123
Email: dcc@brinkleymcnerney.com